

Appl. No. 10/017,513
Amendment dated February 2, 2005
Reply to Office action of January 25, 2005

REMARKS/ARGUMENTS

Applicant wishes to thank examiner Grier for the thoughtful and detailed office action of January 25, 2005. The detailed rejections and reasoning have greatly assisted applicant in preparing this response.

Specification objection

Applicant notes that the examiner has maintained the objection to the specification as failing to provide proper antecedent basis for the subject matter "audible and/or visible monitoring" in claim 1. In the prior response the applicant both pointed out existing language at page 13 of the specification which applicant believed obviated this rejection, and applicant amended the specification at page 14, lines 13 – 16 with the following paragraph:

"One of ordinary skill will recognize from these teachings that ones or all of the elements 26 through 40 may be eliminated or provided in duplicate if desired, in order to reduce cost or provide audible and/or visible [visual] monitoring of multiple programs, selected input signal(s) and/or processed signal(s) and/or with multiple types of monitors and/or outputs in order to fit a particular system or requirements."

Even in view of the examiner's disagreement with applicant's position regarding the page 13 language, the examiner did not make any mention of recognizing this amendment which applicant believes has overcome the objection. Reconsideration is respectfully requested.

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Claim Objection

The examiner objected to claim 10 as a multiply dependent claim which is in turn dependent on claim 9, another multiply dependent claim. Applicant has accordingly amended claim 10 to remove this improper dependency.

Claim Rejections – 35 U.S.C. § 112

The examiner rejected claim 2 under 35 U.S.C. § 112 as being indefinite. Applicant notes that in his previous response, the versions of claims 1 and 2 showing changes listed claim elements g-l, whereas in the clean amended version listed claim elements a-f. This error apparently occurred due to applicant's inexperience with a new word processor. It is the amended version of the claim listed in the first part of the response which is correct, and supports the claim 2 recitation of "said elements." Applicant has herein shown claims 1 and 2 as amended with the correct reference to claim elements a-f. Applicant apologizes for this confusing error and respectfully requests reconsideration of this rejection.

Claim Rejections – 35 U.S.C. § 102(e)

The examiner rejected claims 1-9 as anticipated under 35 U.S.C. 102(e) by Asakura et al., 6,681,018. Applicant respectfully traverses this rejection noting tht Asakura does not show the same invention as claimed. With respect to the **claim 1** rejection, the examiner points to elements 16-19 as the plurality of audio signal inputs (element a), switch 24 as selector (element b) and DSP as signal processing section (element c). Each input signal 16-19 is comprised of left and right channels as the DSP 23 is said to operate to convert the number of channels from two to 5.1

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(column 6, line 61 – column 7, line 4). The examiner acknowledges at page 8 of the office action that in Asakura "... a specific audio signal is selected by change-over switching which is output to a DSP processor to provided [sic] an analog output via a DAC to a plurality of speakers, wherein the output signal in [sic] the same as the selected processed signal ..." (emphasis added) thus the output of the DAC is the same signal as the input signal, having been processed by the DSP. In other words, the 5.1 channels from the DAC (and created by the DSP) correspond to and in total are the same program audio signal as the left and right channels of input signals 16-19. Each of the individual 5.1 channels is but a part of the selected input signal.

Note that Figure 3 is a detailed version of part of Figure 2, and in particular signals 50L, 50C, 50R, 50LFD, 50SL and 50 SR are channels from LPF 26 in Figure 2 (column 7, line 65 – column 8, line 3). These are the left, center, right, low frequency dedicated, surround left and surround right channels respectively corresponding to the input stereo (L&R) audio signal.

The examiner next points to 7 as corresponding to the plurality of output circuits (element d) and 7, 51 and 52 as corresponding to the monitor circuit (element e). Applicant believes that these elements d and e are not met by 7 and 7, 51 and 52 as the examiner asserts.

One of ordinary skill in the art would understand that the 6 channels 50L, 50C, 50R, 50LFD, 50SL and 50 SR are but components of the selected one of the input signals 16-19. These six channels are often referred to as 5.1 channel audio, which is pointed to in Applicant's disclosure for example at line 21 of page 8 through line 1 of page 9. Applicant believes this definition of the 6 channels of one audio signal is the proper interpretation of the operation of Asakura and the interpretation is confirmed by the examiner as pointed out above. Additionally this is the interpretation of "input signal" utilized by applicant in applicant's disclosure. Again, see for example page 8, line 21 through page 9, line 1 of the specification "It will be recognized that each

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or any of these input signals may carry multiple audio signals, examples including two channel stereo, four channels for example consisting of four surround channels or two stereo channels in two languages or 5.1 channel Dolby™ surround sound.” Given this understanding, it is seen that none of the speakers 7 operates such that “each [is] responsive to said processed signal ... to output said processed signal in a distinct known form” as in claim 1 element d. Under the proper interpretation of Asakura each speaker 7 is only responsive to a part of the processed signal and outputs only that part. In addition these speakers are not outputting the processed signal in distinct known form. The speakers respond to analog signals to create sound thus the forms of any plurality of speaker operation is the same rather than distinct. Similarly, terminals 52 and 51 each only respond to part of the processed signal and outputs only that part. The output for both 52 and 51 is analog thus they are not in distinct form. Consequently Asakura does not provide the plurality of output circuits of element d of claim 1.

It may be noted here that applicant does not dispute that all of the speakers operating together serve to monitor the selected signal, only that for element d the plurality of output circuits to output (all channels of) the processed signal in distinct form is missing.

Alternatively, if it is improperly assumed that each of the 6 signals 50L, 50C, 50R, 50LFD, 50SL and 50 SR is a separate signal, any one of which may be considered to be the processed signal of element c, then Asakura still does not teach the claimed invention. Note that assuming one of these multiple parts of the same signal is the claimed input or claimed processed signal is contrary to applicant's use of the term input signal as pointed to above. Applicant believes such improper interpretation should not be resorted to, both because it is contrary to the way the person of ordinary skill would interpret Asakura and because it is contrary to the meaning of input signal as used in applicant's claims. Applicant does not agree that such an interpretation may be utilized in

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determining the allowability of the present claims, however the examiner has incorrectly used such an interpretation in at least part of the rejections thus applicant responds. As a first difference, 50C, 50LFD, 50SL and 50 SR do not meet claim 1 element d because there is only one output circuit per each of those (partial) signals (i.e. the plurality of output circuits is missing).

Note that Asakura states that "...only the terminal unit of one of the systems [52 or 51] may be used" (column 8, lines 43-44 referring to the discussion of 52 and 51 immediately above). For signals 50L and 50R, if the terminals 52L and 51L (or 52R and 51R) are considered the plurality of output circuits of element d, then they are not in distinct known form and there is no monitor circuit responsive to the selected signal of b and/or the processed signal. The speakers 7L', 7R', 7L and 7R are only responsive to the output circuits, not the processed signal, and only one of 52 or 51 is used as stated by Asakura.

While the claims as previously worded are believed allowable over Asakura, applicant has amended the independent claims 1, 4, 7 and 8 to more clearly point out the distinctions thereby avoiding possible frivolous misinterpretations of the claims by an unscrupulous copyist, rather than for reasons of allowance.

With respect to **claim 2**, the examiner points to Asakura inherently disclosing parameters established in manufacture and/or by an operator. Note that claim 2 recites the selecting of b) and/or the processing of c) may automatically change in response to at least one signal present on one said input of a. There is no mention in Asakura that any selecting by 24 or any DSP operation automatically changing in response to any signal 16-19. The examiner's commentary about changing operation depending on whether a digital input device 11 or an analog signal via switch 22 does not support any automatic change in response to one of the signals 16-19, rather it merely points to a change of operation when the listener selects a different input. Applicant notes that no

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specific teaching in Asakura is referenced in the rejection and believes the suggestion of any inherency is merely impermissible hindsight reconstruction of Asakura.

For **claim 3** the examiner points again to Asakura inherently disclosing a mixer and mixing a second signal with the selected signal as part of providing the processed signal of element b. The examiner proposes that the selected signal is provided by 24 to the DSP and the processed signal is provided by the DSP. From Figure 2 it is seen that any mixing which would meet the language of claim 3 (mixing a second signal with the selected signal as part of providing the processed signal) would have to be provided by the DSP. No suggestion of such mixing is found in Asakura. The operation with optical input units and center speaker and headphones language pointed to by the examiner appears to apply to the operation of the adders 55-57 in the headphone output channel of Figure 3 but this is not part of the DSP operation providing the processed signal. Applicant again notes that no specific teaching in Asakura is referenced by the examiner and believes the suggestion of any inherency is impermissible hindsight reconstruction of Asakura.

With respect to **claims 4-6**, the method versions of claims 1-3, the examiner points to the same correspondence between claim elements and Asakura as with claim 1. Applicant's remarks and arguments above are incorporated in response to these rejections.

In regard to **claims 7 and 8**, similar to claim 1, the examiner points to the same correspondence between claim elements and Asakura as with claim 1. Applicant's remarks and arguments above are incorporated in response to these rejections. Additionally with respect to element d of these claims which recites that one output is in digital form, the examiner points to digital output 5 (sic 15). It is noted however that digital output 15 does not output the processed signal in digital form (the examiner points to the processed signal as being provided by the DSP 23) as called for in element d of the claim, but rather 15 is responsive to the switch 22.

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The examiner points to the parameter limitation of **claim 9** as being inherently disclosed by Asakura as was done with respect to claim 2. Applicant notes that no specific teaching in Asakura is referenced by the examiner and believes the suggestion of any inherency is impermissible hindsight reconstruction of Asakura.

Applicant respectfully requests reconsideration of all of the rejections under 35 U.S.C. § 102(e) with respect to Asakura for the reasons given above.

In that the application is believed in form for allowance, further action in that respect is respectfully solicited.

Respectfully Submitted,



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I hereby certify that this correspondence is being facsimile transmitted to the U.S. Patent and Trademark Office, Fax No. (703) 872-9306 on February 2, 2005.



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VERSION WITH MARKING TO SHOW CHANGES MADE

In the Claims:

Claim 1. (currently amended) An audio monitoring and signal processing apparatus including in combination:

- g) a) a plurality of audio signal inputs, each operable to receive an audio signal which is carried via one or more channels,
- h) b) a selector for selecting the audio signal which may be present at one of said inputs of a),
- i) c) a signal processing section responsive to process said selected signal of b) to provided a processed signal carried via one or more channels,
- j) d) a plurality of output circuits, each responsive to all channels of said processed signal of c) to output said processed signal in a distinct known form,
- k) e) a monitor circuit responsive to said selected signal of b) and/or said processed signal of c) to provide audible and/or visible monitoring thereof.

Claim 2. (currently amended) An apparatus as claimed in claim 1 further including:

- h) f) parameters which are established in manufacture and/or by an operator wherein said elements b) and c) operate in response to said parameters such that the selecting of b) and/or the processing of c) may automatically change in response to at least one signal present on one said input of a).

Claim 3. (original) An apparatus as claimed in claim 1 or 2 further including a mixing element operable to mix a second signal with said selected signal of b) as part of providing said processed signal of c).

Claim 4. (currently amended) An audio monitoring and signal conversion method including in combination:

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- a) providing a plurality of audio signal input connections,
- b) selecting one of the audio signals which may be present at one of said input connections of a) which selected audio signal is carried via one or more channels,
- c) processing said selected signal of b) to provide a processed signal carried via one or more channels,
- d) outputting all channels of said processed signal of c) in a plurality of distinct known forms,
- e) monitoring said selected signal of b) and/or said processed signal of c) in audible and/or visible form.

Claim 5. (original) A method as claimed in claim 4 further including the step of:

- f) utilizing parameters which are established in manufacture and/or by an operator such that the selecting of step b) and/or the processing of step c) may automatically change in response to at least one signal present on one said input connection of a).

Claim 6. (original) A method as claimed in claim 4 or 5 further including a mixing step operable to mix a second signal with said selected signal of b) as part of providing said processed signal of c).

Claim 7. (currently amended) An audio monitoring and signal conversion method including in combination:

- a) providing a plurality of audio signal input connections,
- b) selecting one of the audio signals which may be present at one of said input connections of a), which audio signal is carried on one or more channels,
- c) processing all of the channels of said selected signal of b) to provide a processed signal which includes one or more channels,
- d) outputting all channels of said processed signal of c) in a plurality of distinct known forms at least one of which is analog and at least one of which is digital,
- e) monitoring said selected signal of b) in audible and/or visible form.

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Claim 8. (currently amended) An audio monitoring and signal conversion method including in combination:

- a) providing a plurality of audio signal input connections,
- b) selecting one of the audio signals which may be present at one of said input connections of a), which audio signal includes one or more channels,
- c) processing said selected signal of b) to provide a processed signal which includes one or more channels and which processed signal is responsive to all of the channels of said selected signal,
- d) outputting all channels of said processed signal of c) in a plurality of distinct known forms at least one of which is analog and at least one of which is digital,
- e) monitoring said processed signal of c) in audible and/or visible form.

Claim 9. (previously presented) A method as claimed in claim 7 or 8 further including the step of:

- f) utilizing parameters which are established by an operator such that the selecting of step b) and the processing of step c) automatically change in response to at least one signal present on one said input connection of a).

Claim 10. (currently amended) A method as claimed in claim 7, ~~8 or 9~~ or 8 further including a mixing step operable to mix a second signal with said selected signal of b) as part of providing said processed signal of c).

Claim 11. (new) A method as claimed in claim 7 or 8 wherein in step d) said processed signal is output in analog form and at least two digital forms which are distinct by virtue of having different clock rates.

Claim 12. (new) A method as claimed in claim 7 or 8 wherein in step d) said processed signal is output in analog form and at least two digital forms which are distinct by virtue of meeting different industry standards for digital audio signals.